

**THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

TQ Delta, LLC,
Plaintiff,

v.

CommScope Holding Company, Inc., *et al.*,
Defendants.

Civil Action No.: 2:21-CV-00310-JRG

JURY TRIAL DEMANDED

**PLAINTIFF TQ DELTA'S RESPONSE IN OPPOSITION TO
COMMSCOPE'S MOTION TO EXCLUDE EXPERT TESTIMONY OF JONATHAN
PUTNAM, PH.D. THAT IS INCONSISTENT WITH LEGAL PRECEDENT
[DKT NO. 346]**



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I. INTRODUCTION

Defendants’ motion to exclude the opinions of TQ Delta’s damages expert, Dr. Jonathan Putnam, should be denied. Dr. Putnam applies sound economic principles to the facts of this case to arrive at a reasonable royalty, consistent with an obligation to license the asserted standard essential patents (“SEPs”) on fair, reasonable and non-discriminatory (“FRAND”) terms. His opinions satisfy Rule 702 of the Federal Rules of Evidence and *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579 (1993), and will assist the trier of fact. Defendants seek to exclude Dr. Putnam’s opinions based on unsupported claims that his methodology is not reliable, mischaracterizations of his opinions, and misstatements of the law. At best, Defendants’ arguments go to the weight of Dr. Putnam’s testimony, not its admissibility. Defendants’ disagreements should be addressed by cross-examination or the presentation of contrary evidence at trial, not exclusion.

First, Defendants incorrectly assert that Dr. Putnam’s methodology is improper because it allegedly fails to limit damages to the incremental value of the asserted patents. Dr. Putnam’s “top down” methodology, however, does precisely that—and it is supported by both the case law and sound economic theory. Dr. Putnam first determines the *incremental* value of TQ Delta’s asserted patents by computing the aggregate *incremental* value of Digital Subscriber Line (“DSL”) technology over alternative technology, and then calculating the share of each asserted patent family’s contribution to that aggregate value. This method avoids the inclusion of any value gained from inclusion of the patent in the DSL standard and is consistent with applicable law, industry practice, and compliance with FRAND obligations.

Second, Defendants misstate the current law in arguing that Dr. Putnam’s methodology was required to use the smallest saleable patented practicing unit (“SSPPU”) as a royalty base. There is no requirement to do so, and the case law rejects the argument Defendants make here.

Third, Defendants' argument that Dr. Putnam improperly relied on the Nash Bargaining Theory ("NBT") misstates Dr. Putnam's report and applicable law. Dr. Putnam did not rely on NBT as a "rule of thumb," but rather he provided numerous other, independent bases to support his opinion on the division of gains from standardized DSL technology in a FRAND setting.

Fourth, Defendants misstate Dr. Putnam's testimony about the date of the hypothetical negotiation. His opinions on this issue are reliable under the FRAND facts of this case.

Fifth, Defendants incorrectly assert that TQ Delta's damages are limited to the terms of its actual licenses, without adjusting for the assumptions of litigation. That is not the law. Also, Dr. Putnam's damages figures are consistent with TQ Delta's license agreements.

II. BACKGROUND AND SUMMARY OF DR. PUTNAM'S ANALYSIS

TQ Delta presently asserts nine patents across seven patent families. Most of the asserted patent claims are standard essential. TQ Delta has committed to license its SEPs on FRAND terms and conditions. Accordingly, Dr. Putnam was asked to opine on a reasonable royalty using methods consistent with U.S. patent law, considering potential FRAND obligations, which he did.

Dr. Putnam's methodology involved determining the incremental value of the patents in suit. First, Dr. Putnam determined the incremental value of DSL technology by comparing its cost to that of the alternative technology being considered by DSL service providers for the next generation of broadband delivery: fiber to the premise ("FTTP"). He calculated that the cost savings of DSL over FTTP is \$544 per household or \$135.97 per unit of DSL equipment. Ex. A, Putnam Report at 154-174, 194, and Ex. 3. Supported by an analysis of specific facts, Dr. Putnam then allocated a 50/50 share of that savings between implementers and innovators (*i.e.*, DSL SEP patent owners such as TQ Delta) to arrive at a per-DSL unit royalty of \$68. *Id.* at 174-181, 194-195 and Ex. 3. With assistance of a technical expert, Dr. Putnam then identified a pool of potential

DSL SEPs and then used a sound sampling method and in-depth analysis of patent claims to determine that the expected number of “actually-essential U.S. patent families across all DSL standards is 71....” *Id.* at 190. Mapping those families onto standards, he “calculate[d] that these 71 families are expected to be actually essential to one of the DSL standards in a total of 205 instances.” *Id.* Dr. Putnam divided the per unit royalty of \$68 by 205 to arrive at a patent family royalty rate per unit per standard of \$0.33. *Id.* at 194 and Ex. 3. Dr. Putnam also confirmed that his assumption of average value for TQ Delta’s essential patent families is conservative by performing a forward citation analysis (which actually shows a higher-than-average value for TQ Delta’s sampled essential patent families). *Id.* at 191-192. Dr. Putnam’s methodology ensures that TQ Delta’s share of the value of DSL technology reflects its incremental value, is consistent with the case law, and accounts for the unique factors that arise with calculating a royalty for SEPs being offered at a FRAND rate.

III. LEGAL STANDARD

An expert may testify if “the testimony is based on sufficient facts or data,” “the testimony is the product of reliable principles and methods,” and “the expert has reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702(b)-(d). The “rejection of expert testimony is the exception rather than the rule.” Fed. R. Evid. 702, Advisory Committee Notes (2000). Infirmitities in expert opinions should be addressed through cross-examination, presentation of contrary evidence, or jury instruction. *Daubert*, 509 U.S. at 596. The Court’s role “as a gatekeeper is not intended to serve as a replacement for the adversary system.” *Recursion Software Inc. v. Double-Take Software, Inc.*, No. 4:10-CV-403, 2012 U.S. Dist. LEXIS 63299, at *11 (E.D. Tex. May 4, 2012). “[T]he question of whether the . . . opinion is correct is generally a question for the fact finder, not the court.” *Summit 6, LLC v. Samsung Elecs. Co.*, 802 F.3d 1283, 1296

(Fed. Cir. 2015). The Federal Circuit “recognize[s] that estimating a reasonable royalty is not an exact science,” that “the record may support a range of reasonable royalties,” and that there “may be more than one reliable method for estimating a reasonable royalty.” *Id.*

IV. ARGUMENT

Dr. Putnam’s methodology and opinions are the product of the requisite level of intellectual rigor and are supported by relevant law. At best, Defendants’ criticisms go to weight, not admissibility. Also, where, as here, FRAND obligations drive the damages analysis, a more flexible approach is necessary. *Microsoft Corp. v. Motorola, Inc.*, 795 F.3d 1024, 1042 (9th Cir. 2015) (noting the “need for flexibility in determining a royalty for a RAND-encumbered patent”).

A. Dr. Putnam Properly Apportioned the Rate to the Value of the Patents-in-Suit.

Defendants incorrectly assert that Dr. Putnam fails to limit damages to the incremental value of the asserted patents – and “refuse[s] to apply the very law he cites” – because he allegedly establishes a royalty rate “based solely on [TQ Delta’s patent] families’ supposed inclusion in the DSL standards” and “not . . . on the value of the individual inventions.” Dkt. 346 at 5-6.

Incremental Value. For a given SEP, “the patented feature must be apportioned from all of the unpatented features reflected in the standard,” and “the patentee’s royalty must be premised on the value of the patented feature, not any value added by the standard’s adoption of the patented technology.” *Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1232 (Fed. Cir. 2014). The *Ericsson* court further said:

Just as we apportion damages for a patent that covers a small part of a device, we must also apportion damages for SEPs that cover only a small part of a standard. In other words, a royalty award for a SEP must be apportioned to the value of the patented invention (or at least to the approximate value thereof), not the value of the standard as a whole.

Id. at 1232-33. This is exactly what Dr. Putnam did: he began with the incremental value of the relevant DSL standards over their next-best alternative—which would have required a telephone

carrier to install FTTP. Ex. A, Putnam Report at 152-53. Because of the standardized DSL technology made available to telephone carriers, the carriers saved the installation cost of FTTP.¹ Defendants do not contest those cost savings, nor do they deny that their provision of the standardized technology made these savings possible.

Determining the total cost savings from the standardized technology at issue was only the first step of Dr. Putnam's analysis. He then apportioned that value by dividing those gains between implementers and all SEP holders—and then, further apportioning the SEP holders' share to the asserted TQ Delta SEPs that read on each individual DSL standard. Dr. Putnam apportioned the \$544.00 “value of the standard,” per household, down to \$0.33 per patent family, per accused device, per standard, after first reserving half the cost savings from the standardized technology to implementers. In doing so, Dr. Putnam followed Federal Circuit precedent in apportioning “damages for SEPs that cover only a small part of a standard.” *Ericsson*, 773 F.3d at 1232-33.

Value of Standardization. Dr. Putnam's royalty rate is not based on value added by the patents' inclusion in a DSL standard. “The value of standardization” is the value of replacing multiple incompatible technical solutions with a single solution that inter-operates among competing devices. Ex. A, Putnam Report at 76 n.198. Again, Dr. Putnam's calculations are based on the judicially recognized principle of saved costs, not on the gains from interoperability that come from standardization. Dr. Putnam's method obviates the need to compute and remove the gains from inter-operability for the separate reason that his calculation of incremental value depends on alternatives that are already standardized. The DSL standards covered by the asserted patents

¹ Accordingly, Dr. Putnam used the well-recognized principle of cost-savings to determine the value of the standard. *See, e.g., MiiCS & Partners v. Funai Elec. Co.*, No. 14-804-RGA, 2017 U.S. Dist. LEXIS 01511, at *7 (D. Del. Dec. 7, 2017) (“[Plaintiff's expert's] use of a 5% to . . . 10% cost-savings benefit demonstrates that he properly apportioned [] between the patented and unpatented features . . .”).

represent advances over earlier DSL technology (which was standardized), and over the cost of installing the fiber optic cable necessary for FTTP (which is standardized). Thus, any gains from “standardization” are washed out in Dr. Putnam’s calculations. *See id.* at 76. Defendants do not identify any additional “value of standardization” that should be subtracted. Further, because Dr. Putnam calculates only the share of each asserted patent family’s contribution to the incremental value of DSL over FTTP, his calculation does not include any value gained from inclusion of the patent family in the DSL standard; that calculation only reflects the incremental value TQ Delta’s patents add to the accused products.² Indeed, Defendants’ expert acknowledges a “top down” approach is appropriate in FRAND cases. Ex. B, Becker Tr. at 231:6-232:7.

Patent Families. Dr. Putnam does not err (as Defendants assert) in arriving at a royalty rate for each asserted patent family in the context of FRAND-obligated SEPs. As he explains, compliance with a FRAND obligation requires that licensors license their entire portfolios of SEPs on a family basis, not each patent individually. Ex. A, Putnam Report at 182. He found that the licenses produced in this case and licensing practices in the industry involve licensing entire patent portfolios—not individual patents. *Id.* at 182-85. Dr. Putnam also observed that the “patent family” approach is consistent with the policies of standards development organizations (SDO)—the ITU, which does not require disclosure of individual patent numbers, and the ETSI, which treats disclosure and FRAND obligations as pertaining to the whole patent family, not just to individual members. *Id.* at 182-83. Dr. Putnam also noted that the ITC recognizes that patent families, not individual patents, represent the “appropriate unit of observation.” *Id.* at 183-84.

² Defendants’ reliance on *Chrimar Sys. v. Adtran, Inc.*, No. 6:15-cv-00618, 2016 U.S. Dist. LEXIS 204469 (E.D. Tex. Nov. 3, 2016) is misplaced. The patents there were not subject to FRAND obligations, and, unlike here, plaintiff’s expert did not apportion out the value of the standard.

Notably, other courts have rejected the same argument that Defendants make here against Dr. Putnam's apportionment of the value of a standard among "the patent families that comprise it." See *Evolved Wireless, LLC v. Apple Inc.*, Civ. No. 15-542-JFB-SRF, 2019 U.S. Dist. LEXIS 40169, at *12-13 (D. Del. Mar. 13, 2019) (denying motion challenging Dr. Putnam's "top-down" damages approach similar to the one here because the challenges go to weight, not admissibility); see also *Evolved Wireless* briefing; Docket 337 at 18-21. Further, other courts have found that a "per family" valuation approach is appropriate. See *GPNE Corp. v. Apple, Inc.*, No. 12-CV-02885-LHK, 2014 U.S. Dist. LEXIS 53234, at *26-28 (N.D. Cal. Apr. 16, 2014) (finding expert's methodology dividing profits of accused product by the number of SEP families to arrive at an average per family profit was "sufficiently reliable"). Defendants cite no case requiring one to assign individual values to individual SEPs within a single family—and the above-cited case law, SDO policies, industry practice and economic logic all contradict such a claim.³

Moreover, as the Federal Circuit recognizes, courts limit the number of asserted patent claims in a case in recognition of the duplicative nature of numerous claims within a patent family. *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1312 (Fed. Cir. 2011). Indeed, this Court narrowed the number of patents and claims TQ Delta could assert, consistent with the notion that patents within a given family frequently overlap and may cover substantially similar subject matter. The value of that subject matter does not reasonably depend on the number of ways

³ Defendants cite *Limelight Networks, Inc. v. XO Commc'ns, LLC*, No. 3:15-CV-720, 2018 U.S. Dist. LEXIS 17802, at *13 (E.D. Va. Feb. 2, 2018) and *Microsoft Corp. v. Motorola, Inc.*, C10-1823JLR, 2013 WL 2111217, at *20 (W.D. Wash. Apr. 25, 2013) for the proposition that different patents have different values. However, *Limelight* did not involve SEPs or FRAND issues, and, in *Microsoft*, the court merely observed that an important patent would reasonably command a higher royalty than a less important patent in the context of discussing patent holdup, not the valuation of the plaintiff's patent portfolio. When the Court valued the patent portfolio, it did not discuss the value of the individual patents. See also *TCL Commc'n. Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. SACV 14-341, 2017 WL 6611635, at *13-17 (C.D. Cal. Dec. 21, 2017) (the court did not assign values to individual patent families but treated them the same for valuation purposes).

it can be claimed or on the somewhat arbitrary nature of continuation practice.

As Dr. Putnam explains, continuations in a patent family share a specification and have interdependent claims. Ex. A, Putnam Report at 185. Approaches that assign value to individual family members err by treating each family member as though they are economically and legally independent when they are not. *Id.* at 186. The interdependencies among family members are accounted for, however, by treating the family as the economic unit of observation. *Id.* Indeed, patent damages law does not require apportionment between a patent claim that is asserted and infringed and a claim in the same patent that is not asserted and/or not infringed. *See* Ex. D, Putnam Tr. at 70:21-71:11. Nor does the law require that, if two claims in the same patent are asserted, the expert must assign independent values to each of them. Such “apportionment” is economically and legally meaningless. Similarly, patents within the same family are collections of related claims, some of which are asserted, while others are not. If one patent in a family is infringed, there need be no independent value assigned to the other members of the same family. Thus, it follows that apportionment between parent and daughter patents is also economically and legally meaningless.

Further, setting royalties on a family basis serves the contractual and policy objectives of preventing a patent owner from dispersing its claims among numerous individual yet related patents, artificially increasing its “patent count,” and exaggerating the numerical and economic importance of its inventions, to thereby seek greater royalties. Any requirement to assess royalties for individual SEPs would produce the anomalous result that the licensee would owe additional royalties if additional patents later issued in the same family because the issuance of additional patents would change the patent count and, thus, the patentee’s share of the aggregate royalty for the standard. Ex. C, Putnam Reply Report in *TQ Delta, LLC v. 2Wire, Inc.*, Case No. 13-cv-1835 (D. Del. Dec. 21, 2018) at ¶ 184 (TQD_TX00338478 at 564-565). As the licenses produced by

both parties in this case demonstrate, royalties do not increase when a SEP family adds a member. Conversely, requiring that each family member receive an individual royalty would change the value of an individual SEP over time. That implication is inconsistent with the patentee's FRAND obligations, which require that SEPs be licensed to different implementers on a non-discriminatory basis.⁴ Further, Defendants should not be allowed to take advantage of the Court's narrowing orders, for which Defendants advocated based on efficiency, only to use compliance with those orders as a tool to reduce damages. Lastly, Defendants' criticisms of Dr. Putnam's apportionment approach at best go to weight, not admissibility.

B. Defendants' SSPPU Argument is Wrong as a Matter of Law.

Defendants' argument that Dr. Putnam was required to base his royalty calculations on the purported cost of the SSPPU is wrong. More recent Federal Circuit case law is clear that a royalty need not be based on the SSPPU.⁵ The Federal Circuit held that parties are not required to employ the SSPPU methodology employed in the *Innovatio* and *Microsoft* cases:

[T]o the extent D-Link argues that the trial court was required to give instructions that mirrored the analysis in *Innovatio* or *Microsoft*, we specifically reject that argument Although we recognize the desire for bright line rules and the need for district courts to start somewhere, courts must consider the facts of record when instructing the jury and should avoid rote reference to any particular damages formula.

Ericsson, 773 F.3d at 1231-32 (emphasis added); *see also Exmark Mfg. Co. v. Briggs & Stratton Power Prods. Grp.*, 879 F.3d 1332, 1348-49 (Fed. Cir. 2018) ("So long as [patentee] adequately

⁴ *Apple Inc. v. Wi-LAN, Inc.*, No. 14CV2235, 2019 U.S. Dist. LEXIS 191805 (S.D. Cal. Jan. 3, 2019) is not "instructive." Dkt. 346 at 7-8. There, the Court found that the plaintiff's damages methodology was based on benefits of the "Voice over LTE" standard, not on the share of those benefits attributable to the asserted patents, thus, "overstat[ing] the footprint of the invention." *Wi-LAN*, 2019 U.S. Dist. LEXIS 191805, at*13-14. Dr. Putnam, however, apportioned the benefits of DSL between TQ Delta's inventions and all the other inventions essential to the DSL standard so as to not "overstate the footprint" of the inventions.

⁵ Even the older cases Defendants cite do not state that a royalty always must be based on the SSPPU. *See LaserDynamics, Inc. v. Quanta Comput., Inc.*, 694 F.3d 51, 67 (Fed. Cir. 2012) (addressing what is "generally required") (emphasis added); *VirnetX, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1327 (Fed. Cir. 2014) ("[W]e have previously permitted patentees to base royalties on the [SSPPU].") (emphasis added).

and reliably apportionments between the improved and conventional features of the accused [product], using the [entire] accused [product] as a royalty base and apportioning through the royalty rate is an acceptable methodology.”); *Commonwealth Sci. & Indus. Rsch. Org. v. Cisco Sys., Inc.*, 809 F.3d 1295, 1303 (Fed. Cir. 2015) (holding a rule “which would require all damages models to begin with the [SSPPU] ... is untenable”). As Dr. Putnam pointed out, the former director of the USPTO and the former chief judge of the Federal Circuit concluded: “[n]o court has ever held that SSPPU is a hard-and-fast substantive requirement of patent law, and indeed the Federal Circuit has held just the opposite in CSIRO.” Ex. A, Putnam Report at 77, n.200.

Other courts, including this one, have found that royalty calculations need not be based on the SSPPU. *See HTC Corp. v. Telefonaktiebolaget LM Ericsson*, No. 6:18-CV-00243, 2019 U.S. Dist. LEXIS 2872, at *17-18 (E.D. Tex. Jan. 7, 2019) (“the prevailing industry standard . . . has been to base FRAND licenses on the end-user device and not on the SSPPU . . . a reasonable person in the same situation would not interpret FRAND to mean that the license *must* be based on the SSPPU.”); *Fed. Trade Comm’n v. Qualcomm Inc.*, 969 F. 3d 974, 998-99 (9th Cir. 2020) (“No court has held that the SSPPU concept is a per se rule for ‘reasonable royalty’ calculations Moreover, the Federal Circuit rejected the premise ...that the SSPPU concept is *required* when calculating patent damages.”); *TCL Commc’n Tech. Holdings, Ltd. v. Telefonaktiebolaget LM Ericsson*, No. CV 15-2370JVS, 2018 U.S. Dist. LEXIS 234535, at *161-64 (C.D. Cal. Sept. 14, 2018) (calculating a royalty rate for smartphones based on the entire handset, not chipsets).

Further, there is no authority for Defendants’ assertion that one must use an SSPPU theory in conducting apportionment— whether or not they rely on industry license agreements. Dkt. 346 at 8-9. Rather, “[s]o long as [patentee] adequately and reliably apportionments between the improved and conventional features of the accused [product], using the [entire] accused [product] as a royalty

base and apportioning through the royalty rate is an acceptable methodology.” *Exmark*, 879 F.3d at 1348. *See also Ericsson*, 773 F.3d at 1226 (“Logically, an economist could [apportion] in various ways [. . . such as] by adjustment of the royalty rate so as to discount the value of a product’s non-patented features [...]”). Indeed, another court rejected a similar challenge to Dr. Putnam’s use of a top-down theory not based on an SSPPU. *Evolved Wireless*, 2019 U.S. Dist. LEXIS 40169, at *12-14 (denying *Daubert* motion, stating such a challenge goes to weight, not admissibility). Defendants’ own expert acknowledges that a royalty need not be based on SSPPU in FRAND cases. *See Ex. B, Becker Tr.* at 216:2-224:19.

Dr. Putnam also provides sound economic reasons for not relying on an SSPPU theory:

- The SSPPU theory does not account for interactive effects between the invention and the other components that together create the value of the end product;
- The definition of a “Licensed Product” found in most patent licenses and the relevant licenses in this case is [REDACTED];
- All of the claims asserted in TQ Delta’s patents can only be practiced by a combination of components in the end product, only one of which is the DSL chip;
- If a device is to function as the “smallest salable *patent practicing* unit,” it must be *patent practicing*; here the chipset is only one *necessary* element to practice the asserted claims, but it is not *sufficient* for the end product’s compliance with the standard; and
- Because the maker of a standard-compliant DSL microprocessor does not attempt to collect royalties *on* behalf of all those who contributed the standard-essential technology it embodies, its price does not reflect the entire value of the technology, so using the profit on the microprocessor as a proxy for the value of the technology is baseless.

Ex. A, Putnam Report at 77-83. Defendants do not refute this economic reasoning; rather, they argue that Dr. Putnam “rejects the well-settled SSPPU rule.” Dkt. 346 at 9. There is no such rule.

C. Dr. Putnam Did Not “Improperly Rely” on Nash Bargaining Theory.

Defendants misrepresent the bases for Dr. Putnam’s 50/50 division of DSL gains between implementers and innovators. They claim his division is based on using NBT as rule of thumb,

does not follow an acceptable damages framework, and is not tied to the facts of the case. Dkt. 346 at 10. None of that is true. First, Dr. Putnam's 50/50 division is *not* between the parties to the hypothetical negotiation (TQ Delta and Defendants), but between innovators and implementers as discrete interest groups within the SDO. Thus, prior critiques of the use of NBT in patent damages "hypothetical negotiations" do not apply. Second, Dr. Putnam pointed to independent justifications for the division, in addition to case-specific considerations that support the NBT. Ex. A, Putnam Report at 176-79. Those justifications include: the facts that SDOs emphasize the need for a "fair" and "balanced" division between innovators and implementers; a standard participant can be an innovator *and* an implementer and, therefore, must assume the bargaining positions of both; and independent economic studies of how bargaining parties divide gains. *Id.*; Ex. D, Putnam Tr. at 143:21-158:21; 260:19-261:19. Third, Dr. Putnam explained that he did "not (1) apply [NBT] to TQ Delta and CommScope, (2) rely on the [NBT] solely, or (3) employ it as a rule of thumb." Ex. A, Putnam Report at 178 n.447. Thus, he did not improperly rely on NBT as a "rule of thumb" starting point or apply it to the parties. Rather, he divided DSL gains between implementers and innovators, using multiple economic studies, which he then applied to the facts of this case.

Also, courts have held that a damages analysis *can* properly rely on NBT where it shows that, on the facts of the case, the assumptions underlying the theory are satisfied. *See Genuine Enabling Tech. LLC v. Sony Corp.*, No. 17-cv-135, 2022 U.S. Dist. LEXIS 214307, at *41-42 (D. Del. Nov. 28, 2022) ("[A]n expert may not rely on the [NBT] . . . without analyzing whether, on the facts of the case, the assumption underlying the theorem are satisfied"). Dr. Putnam undertook the requisite factual analysis. Ex. A, Putnam Report at 177; 178 n.447. At best, Defendants' criticisms of Dr. Putnam's division of gains from the DSL standard go to weight, not admissibility.

D. Dr. Putnam's Opinions Regarding the Hypothetical Negotiation Date Are Reliable Under the FRAND Facts of This Case.

CommScope misstates Dr. Putnam's opinion regarding the hypothetical negotiation date, asserting that he erroneously places it in 2004. Dkt. 346 at 11. In fact, he testified the opposite ("I did not say that the hypothetical occurred – negotiation occurs in 2004. So let's just be clear about that."; "Obviously, you aren't bargaining in 2004."). Ex. D, Putnam Tr. at 115:10-12, 122:22-23. He explained, as in his Report, TQ Delta's non-discrimination commitment requires TQ Delta to offer similar terms and conditions to similarly-situated licensees, whether they need a license beginning in 2004 (when the standard was finalized) or in 2008 (when CommScope began to practice the standard). *Id.* at 101:19-102:7, 116:9-117:3; Ex. A at 83-86, 107. And he explained that if the price of TQ Delta's technology had been set in 2008, the reasonable royalty would have been *higher* (discriminating *against* CommScope) because the cost of implementing the alternative had increased. Ex. D at 116:9-118:20; 119:17-120:2; 137:18-138:4. In short, "you can negotiate in 2008, but you need to adopt the terms that you would have set in 2004 for FRAND purposes. *Id.* at 117:11-13. Thus, in addition to ensuring that TQ Delta complied with its FRAND obligations by offering non-discriminatory terms regardless of the date of any licensee's first infringement, Dr. Putnam also ensured that his analysis favored CommScope – not TQ Delta. CommScope does not cite any cases that either prohibit Dr. Putnam's approach in the FRAND context, or that excuse the FRAND violation that CommScope advocates and that his approach seeks to prevent.

E. Dr. Putnam's Damages Figures Are Consistent with TQ Delta's License Agreements; CommScope Fails to Account for Well-Known Litigation Risks Regarding Validity and Infringement.

CommScope argues that TQ Delta's damages are limited to the terms of its actual licenses, without adjusting for the assumptions of litigation (like the assumed validity, infringement, and essentiality of the patents). That is not the law. First, license terms can only be controlling when they constitute an "established royalty," which CommScope does not concede. Second, a

reasonable royalty calculated under the assumption of validity and infringement should be greater than the rate found in a license for which liability has not been determined. The rates in the [REDACTED] [REDACTED] which are otherwise comparable, [REDACTED] [REDACTED] risks that (by assumption) are not present here. Ex. A, Putnam Report at 96-103, 195, at Ex. 3; Ex. E, Putnam 2nd Suppl. Report at 3-4. As Dr. Putnam explains, outside of the hypothetical negotiation where infringement and validity are presumed, a licensee is willing to pay only up to the “expected value” of the license (the full economic value of the license discounted for the probability that the patent is invalid and/or not infringed). Ex. A at 195, n.481 (*citing* S. Kalos and J. Putnam, “On the Incomparability of ‘Comparables’: An Economic Interpretation of ‘Infringer’s Royalties.’” *The Journal of Proprietary Rights* 9(4), April 1997: 2-5). Third, Dr. Putnam used published data to show that the rates found in the comparable TQ Delta licenses are consistent with his damages rates, after removing the risks of invalidity and non-infringement: the ratio of the rate for the asserted patents to the rates under the comparable licenses ranged from [REDACTED]. Ex. A at Ex. 3, Schedule A. As Dr. Putnam explained, these ratios are consistent with or less than the ratio derived from Federal Circuit Chief Judge Kimberly Moore’s empirical analysis (plaintiff patent found valid and infringed in 58% of cases; assumption of success implies a multiplier of $1 / 0.58 = 1.72$) (“Judges, Juries, and Patent Cases – An Empirical Peek Inside the Black Box,” Mich. L. Rev. 99 (May 2, 2000) at 232). Ex. A at 195, n.481, 196. Fourth, making adjustments to existing license terms to account for the assumptions of litigation is not legally improper. In *Mondis Tec. Ltd. v LG Elecs., Inc.*, the court approved plaintiff Mondis’ use of a damages multiplier for removing uncertainty about patent validity and infringement. 407 F.Supp.3d 482, 497-500 (D.N.J. 2019) (“[t]he Federal Circuit recognizes such an adjustment to patent value to be proper”; “Discounting

the value of a patent to adjust for uncertainty about validity or infringement appears to be uncontroversial in Federal Circuit jurisprudence.”); *see also AstraZeneca AB v. Apotex Corp.*, 782 F.3d 1324, 1335 (Fed. Cir. 2015) (no error where court accounted for “similarities and differences between those negotiations and the hypothetical negotiations”).

CommScope is wrong in arguing that the [REDACTED] licenses disprove Dr. Putnam’s calculations. [REDACTED]

while Dr. Putnam calculated damages of \$2.66 per unit. Ex. A, Putnam Report at Exhibit 3, Schedule A. CommScope points to [REDACTED]

[REDACTED] Ex. A, Putnam Report at 89-91, 116-117 ([REDACTED] and 116 at n.314 [REDACTED] CommScope has met neither of those conditions. Since TQ Delta committed to “FRAND terms and conditions,” not to a “FRAND rate,” it is logical and unsurprising that when conditions differ between agreements, their terms differ also.

CommScope also argues that in the [REDACTED] in just the five VDSL2 families asserted . . . That implies a royalty rate of [REDACTED] for each TQ Delta VDSL SEP.” Dkt. 346 at 13. However, there is no evidence that any of the 38 patents, other than those TQ Delta has asserted in this litigation, is infringed, never mind that any has independent value. CommScope now claims the law must impute value to these patents, not because it concedes their infringement or proposes to pay for them, but only for the transparent purpose of driving down the royalty it owes on the patents actually asserted. In any event, CommScope’s arguments concerning competing interpretations of TQ Delta’s license agreements go to weight, not admissibility.

V. CONCLUSION

For the foregoing reasons, TQ Delta requests that the Court deny Defendant’s Motion.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned certifies that the foregoing document is being filed electronically in compliance with Local Rule CV-5(a). As such, this document is being served this January 6, 2023, on all counsel of record, each of whom is deemed to have consented to electronic service. L.R. CV-5(a)(3)(A).

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